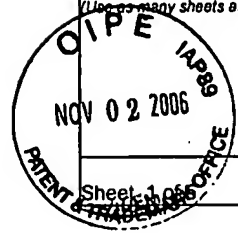


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Examiner Name	Unknown
Attorney Docket No: 884.B52US1	

US PATENT DOCUMENTS

Examiner Initial *	USP Document Number	Publication Date	Name of Patentee or Applicant of cited Document	Filing Date If Appropriate
/KT/	US-2001/0033611A1	10/25/2001	Grimwood, M., et al.	03/01/2001
	US-2002//0173271A1	11/21/2002	Blair, J. L. et al.	03/21/2001
	US-2003/0043732A1	03/06/2003	Walton, J. R., et al.	06/26/2001
	US-2003/0083703A1	05/01/2003	Zhu, Q., et al.	10/25/2001
	US-2003/0161282A1	08/28/2003	Medvedev, I., et al.	02/26/2002
	US-2003/0204210A1	10/30/2003	Ousdigian, K. T., et al.	04/30/2002
	US-2003/0208241A1	11/06/2003	Bradley, K., et al.	05/02/2002
	US-2004/0258174A1	12/23/2004	Shao, L., et al.	02/26/2004
	US-2005/0031047A1	02/10/2005	Maltsev, A. A., et al.	12/16/2003
	US-2005/0058217A1	03/17/2005	Sandhu, S., et al.	06/28/2004
	US-2005/0128936A1	06/16/2005	Shao, L.	09/15/2004
	US-2005/0141412A1	06/30/2005	Sadri, A. A., et al.	12/29/2003
	US-2005/0152299A1	07/14/2005	Stephens, A. P.	03/23/2004
	US-2005/0152330A1	07/14/2005	Stephens, A. P., et al.	03/31/2004
	US-2005/0152357A1	07/14/2005	Stephens, A. P.	03/23/2004
	US-2005/0152465A1	07/14/2005	Maltsev, A. A., et al.	03/30/2004
	US-2005/0152466A1	07/14/2005	Maltsev, A. A., et al.	06/07/2004
	US-2005/0152473A1	07/14/2005	Maltsev, A. A., et al.	03/26/2004
	US-2005/0152484A1	07/14/2005	Sandhu, S., et al.	03/30/2004
	US-2005/0154957A1	07/14/2005	Jacobsen, E. A.	03/10/2004
	US-2005/0154958A1	07/14/2005	Xia, B., et al.	03/31/2004
	US-2005/0166131A1	07/28/2005	Xia, B., et al.	03/31/2004
	US-2005/0174927A1	08/11/2005	Stephens, A. P., et al.	12/20/2004
	US-5,311,456	05/10/1994	Chiang, L. C., et al.	05/28/1993
	US-5,960,351	09/28/1999	Przelomiec, T. A.	02/26/1997
/KT/	US-6,430,441	08/06/2002	Levine, P. A.	01/18/2000

FOREIGN PATENT DOCUMENTS

Examiner Initials*	Foreign Document No	Publication Date	Name of Patentee or Applicant of cited Document	T ²
/KT/	EP-0939527A1	09/01/1999	Ralf, B., et al.	
	EP-1187506A1	03/13/2002	Kogiantis, A. G., et al.	
	EP-1240918A2	09/18/2002	Mouchawar, G. A., et al.	
	EP-1411647A2	04/21/2004	Liu, J.-T., et al.	
	EP-1533963A2	05/25/2005	Moorti, T., et al.	
	GB-2384651	07/30/2003	Matsuoka, H., et al.	
	WO-97/37441A1	10/09/1997	Dent, P. W.	
	WO-97/47147A1	12/11/1997	Zicker, R. G.	
	WO-01/59965A1	08/16/2001	Banerjee, S.	
/KT/	WO-01/95579A2	12/13/2001	Webster, M., et al.	

EXAMINER /Khai Tran/ DATE CONSIDERED 06/06/2007

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FOREIGN PATENT DOCUMENTS				
Examiner Initials*	Foreign Document No	Publication Date	Name of Patentee or Applicant of cited Document	T ²
/KT/	WO-03/001702A1	01/03/2003	Walton, J. R., et al.	
	WO-03/047198A2	06/05/2003	Kadous, T., et al.	
	WO-2004/047354A1	06/03/2004	Jorswieck, E., et al.	
	WO-2005/025471A1	03/24/2005	Purcell, R. W., et al.	
	WO-2005/029758A2	03/31/2005	Shao, L.	
	WO-2005/029759A2	03/31/2005	Sandhu, S., et al.	
	WO-2005/034435A2	04/14/2005	Maltsev, A. A., et al.	
	WO-2005/067171A1	07/21/2005	Sadri, A., et al.	
	WO-2005/069572A1	07/28/2005	Sandhu, S., et al.	
	WO-2005/069573A1	07/28/2005	Stephen, A. P.	
	WO-2005/069667A1	07/28/2005	Stephens, A. P.	
	WO-2005/071871A1	08/04/2005	Stephens, A. P., et al.	
	WO-2005/071910A1	08/04/2005	Maltsev, A. A., et al.	
	WO-2005/071912A1	08/04/2005	Maltsev, A. S., et al.	
/KT/	WO-2005/122515A1	12/22/2005	Sadri, A., et al.	

OTHER DOCUMENTS -- NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
/KT/		"802.11g™ IEEE Local and Metropolitan Area Networks; Part 11: Wireless LAN Medium Access Control (MAC) and Physical Layer (PHY) specifications; Amendment 4: Further Higher Data Rate extension in the 2.4 GHz Band", <u>IEEE Std. 802.11Gtm-2003</u> , The Institute of Electrical and Electronics Engineers, Inc. NY, (June 27, 2003), 78 pgs.	
		"International Search report for corresponding PCT Application No. PCT/US2004/029698", (Attorney Docket No. 884.B52WO1), (June 13, 2005), 7 pgs.	
		"Supplement to IEEE Standard for Information Technology- Telecommunications and Information Exchange Between Systems- Local and Metropolitan Area Networks - Specific Requirements - Part 11: Wireless LAN Medium Access Control (MAC) and Physical Layer (PHY)", <u>IEEE Std. 802.11a-1999</u> , IEEE Computer Society, New York, NY, (1999 (reaffirmed June 12, 2003)), 91 pgs.	
		"Supplement to IEEE Standard for IT-Telecomm. & Info. Exchange Between Systems - Local and Metropolitan Area Networks - specific requirements. Part 11: Wireless LAN Medium Access Control (MAC) and Physical Layer (PHY) Specs: High-speed Physical Layer in 5GHz Band", <u>IEEE Std. 802.11a-1999</u> , (December 30, 1999), 90 pgs.	
/KT/		ABDUL AZIZ, M. K., et al., "Indoor Throughput and Range Improvements Using Standard Compliant AP Antenna Diversity in IEEE 802.11a and ETSI HIPERLAN/2", <u>VTC 2001 Fall. IEEE VTS 54th Vehicular Technology Conference, 2001, Volume 4, (October 7-11, 2001)</u> , 2294-2298	

EXAMINER

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DATE CONSIDERED

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/KT/		BANGERTER, B., et al., "High-Throughput Wireless LAN Air Interface", <u>Intel Technology Journal</u> , 7(3), http://developer.intel.com/technology/itj/index.htm , (August 9, 2003), 47-57	
		BÖHNKE, R., et al., "Reduced Complexity MMSE Detection for BLAST Architectures", <u>GLOBECOM 2003 - IEEE Global Telecommunication Conference Proceedings</u> , 7 (7), (Dec. 1, 2003), 2258-2262	
		BÖLCSKEI, H., "Space-Frequency Coded MIMO-OFDM with variable Multiplexing-Diversity Tradeoff", <u>IEEE International Conference on Communications</u> , 4, (May 11, 2003), 2837-2841	
		CHOI, B., et al., "Optimum Mode-Switching-Assisted Constant-Power Single-and Multicarrier Adaptive Modulation", <u>IEEE Transactions on Vehicular Technology</u> , 52(3), (May, 2003), 536-560	
		CHUNG, C., et al., "Estimation of delay offset in multi-carrier differential phase modulation systems", <u>Communication Technology Proceedings of ICCT2003</u> , 2, (April 9, 2003), 1848-1851	
		CIOFFI, J. M., "Chapter 4 - Multi-Channel Modulation", <u>Lectures on Digital Communications, Stanford University</u> , Available from http://www.stanford.edu/class/ee379c/ , (2001), 278-314	
		DAMEN, M. O., et al., "On Maximum-Likelihood Detection and the Search for the Closest Lattice Point", <u>IEEE Transactions on Information Theory</u> , IEEE Inc. 49 (10), (October 1, 2003), 2389-2402	
		DAMMANN, A., et al., "Transmit/Receive - Antenna - Diversity Techniques For OFDM Systems", <u>European Transactions on Telecommunications</u> , 13 (5), Multi-Carrier Spread-Spectrum and Related Topics, (September, 2002), 531-538	
		FUJINO, Y., et al., "Transmitter With Antenna Array For MC-CDMA Forward Link", <u>IEEE Antennas and Propagation Society International Symposium</u> , (June, 22, 2003), 847-850	
		HIGUCHI, K., et al., "Adaptive Selection of Surviving Symbol Replica Candidates Based on Maximum Reliability in QRM-MLD for OFCDM MIMO Multiplexing", <u>Proceedings, IEEE Global Telecommunications Conference (GLOBECOM '04)</u> , (November 29, 2004), 2480-2486	
		HUTTER, A. A., et al., "Effects of Fading Correlation on Multiple Antenna Reception Mobile OFDM Systems", <u>IEEE Vehicular Technology Conference</u> , (Sep. 24, 2000), 2744-2749	
		LEKE, A., et al., "A maximum rate loading algorithm for discrete multitone modulation systems", <u>GLOBECOM '97, Global Telecommunications Conference</u> , 1997, Volume 3, (November 8, 1997), 1514-1518	
/KT/		MA, X., "Complex Field Coded MIMO Systems: Performance, Rate, and Trade-Offs", <u>Wireless Communications and Mobile Computing</u> , 2, (Oct, 2002), 693-717	

EXAMINER

/Khai Tran/

DATE CONSIDERED

06/06/2007

Substitute Disclosure Statement Form (PTO-1449)
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/KT/		PAULRAJ, A., "Introduction to Space-Time Wireless Communications", <u>Introduction to Space-Time Wireless Communications</u> , Cambridge University Press, Cambridge, UK, (May 2003), 4 pgs.	
		RENDE, D., et al., "Bit Interleaved Space-frequency Coded Modulation for OFDM Systems", <u>IEEE International Conference on Communication, Vol.1 of 5, Wireless Information and Networking Group, (ICC 2003), (May 11,2003), 2827-2831</u>	
		SAMPATH, H., et al., "Linear Precoding and Decoding for Multiple Input Multiple Output(MIMO) Wireless Channels", <u>Dissertation, Doctor Philosophy, Department of Electrical Engineering, Stanford University (April, 2001), 157 pgs.</u>	
		SANDHU, S., et al., "Analog Combining of Multiple Receive Antennas With OFDM", <u>IEEE International Conference on Communications, (May 11, 2003), 3428-3432</u>	
		SEETHALER, D., et al., "Efficient Approximate-m1 Detection for Mimo Spatial Multiplexing Systems by Using a 1-D Nearest Neighbor Search", <u>Proceedings of the 3rd IEEE International Symposium on Signal Processing and Information Technology (ISSPIT 2003), (December 14, 2003),290-293</u>	
		SHAO, L., "High Rate Space Frequency Block Codes for Next Generation 802.11 WLANs", <u>IEEE International Conference on Communications, 5, (June 20, 2004), 2995-2999</u>	
		SIMOENS, S., et al., "Optimum Performance of Link adaptation in HIPERLAN/2 networks", <u>IEEE 53rd Vehicular Technology Conference, (VTC, 2001) Volume 2 of 4, (May 6-9, 2001), 1129-1133</u>	
		SLIMANE, B. S., "A Low Complexity Antenna Diversity Receiver For OFDM Based Systems", <u>IEEE International Conference on Communications, (June 6, 2001),1147-1151</u>	
		TIAN, Q., et al., "The Performance of Multi-Carrier CDMA with Base Station Antenna Arrays in Fading Channels", <u>Vehicular Technology Conference, (May. 15, 2000), 1498-1502</u>	
		WANG, Z., "Complex-Field Coding for OFDM Over Fading Wireless Channels", <u>IEEE Transactions on Information Theory, 49(2), (March, 2003), 707-720</u>	
		YIH, C. H., et al., "Adaptive Modulation, Power Allocation and Control for OFDM Wireless Networks", <u>IEEE 11th Annual Symposium on Personal, Indoor and Mobile Radio Communication, 2, (September 18, 2000), 809-813</u>	
		YUAN, H., et al., "An Adaptive Array Antenna with Path Selection of OFDM Signal", <u>European Personal Mobile Communications Conference., (April 22, 2003),412-416</u>	
/KT/		YUE, J., et al., "Channel Estimation and Data Detection for MIMO-OFDM Systems", <u>Proceedings, IEEE Global Telecommunications Conference. (GLOBECOM '03), 7(7), (December 1, 2003), 581-585</u>	

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DATE CONSIDERED

06/06/2007

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	First Named Inventor	Shao, Lei
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	Examiner Name	Unknown
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/KT/		ZHEN, L., et al., "A Modified Sub-Optimum Adaptive Bit and Power Allocation Algorithm in Wideband OFDM System", <u>Canadian Conference on Electrical and Computer Engineering, (CCECE 2003), Vol. 3 of 3, (May 4, 2003), 1589-1592</u>	

EXAMINER	/Khai Tran/	DATE CONSIDERED	06/06/2007
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